

AIR MAIL 6

APRIL 1992

IAI

INDOOR AIR INTERNATIONAL

Winds of Change

On the eve of our second 'Stand Alone' International Conference in Athens at the end of this month it is obvious that IAI has been launched successfully world wide and is here to stay. Over 100 papers from more than 27 countries are due to be presented, with a vast diversity of subjects and geographical representation from Russia, East and West Europe, North America and the Far East.

It can also be said that we have a very active membership. It is of course the usual pattern for new societies to attract passionate pioneers to their cause and perhaps inevitable that 'observers' tend to follow later. Let us all resolve to keep the latter to a minimum.

A good way to encourage activity, especially in such an international society as ours, is to promote and foster the development of regional

groups with their own identity and interests, under the umbrella of IAI. This process can of course include the development of regional newsletters and your editor is very willing to give advice and assistance to those members considering such a move.

The content of this issue shows this happening in Europe, reflecting the geographical location of the present editor's chair - 6 articles concern European matters, 3 deal with 'The Rest'. Come forward fledgling editors in the East and elsewhere to redress the balance!

Frank Lunau's contribution on page 5 succinctly summarises IAI progress to date - and we must maintain the momentum. Another aspect of this is the provision of sponsors. Please let your President know of individuals and organisations that would be receptive to an approach. -

The International Association for Indoor Air Quality
Postfach 2, CH-4467, Rothenfluh, Switzerland

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IAI MEETINGS

INDOOR AIR QUALITY PROBLEMS IN POLAND

Warsaw November 15th 1991

The first interdisciplinary meeting in Poland discussing different aspects of Indoor Air Quality took place in Warsaw on November 15th 1991. The Institute of Heating and Ventilating from Warsaw University of Technology, the organiser and sponsor of the meeting, had invited representatives of every Polish organisation, institution or associations which should be interested in this problem. The Hosts were all the time in close touch with the President Elect of IAI Dr George Leslie who had declared kind help and participation of IAI speakers.

Many people from Poland answered the invitation and more than 50 people participated in the meeting.

The meeting, entitled "Indoor Air Quality in Poland" was divided into three parts:

- INDOOR AIR QUALITY AND LAW

Chairman: Dr K Benczek (PL) Presentations: Dr L Levy (UK) Professor R Perry (UK) Msc A Bazgier (PL)

- INDOOR AIR QUALITY AND HUMAN HEALTH

Chairman: Associate-prof. P Gutowski (PL)
Presentations: Dr G Leslie (UK) Dr J A Hoskins (UK) Dr J Ciszecski (PL) Dr T Skarbek (PL) Dr A Molocznik (PL) Msc A Brzozowski (PL)

- INDOOR AIR QUALITY - POSSIBILITIES OF DANGEROUS FACTORS REDUCTION

Chairman: Associate-prof. T Jedrzejewska-Scibak (PL) Presentations: Associate-prof. J Makowieki (PL) Dr K Benczek (PL) Msc J Sowa (PL)

Official languages of presentation and discussion were Polish and English with simultaneous translation.

The idea of organising the meeting found confirmation in very lively discussion after every part of the meeting. All participants agreed that there is a great need of evidence current situation in Poland so organisers decided to publish as soon as possible the proceedings from the meeting (unfortunately in Polish).

Necessity of exchanging information between different disciplines including scientists, members of the medical profession, architects, legislators, and HACK

engineers was proved so obviously that Institute of Heating and Ventilating from Warsaw University of Technology decided to organise such a discussion forum every two years. Of course people from all countries who are interested in the situation in Poland or who would like to share their experiences with people in Poland are all welcome in Warsaw in autumn 1993.

For further information please contact: Prof. Teresa Jedrzejewska-Scibak Warsaw University of Technology Institute of Heating and Ventilating PL00-653 Warsaw Nowowiejska Str. 20 Tel: +48-22-21007428 Poland Fax: +44-22-252992

Teresa Jedrzejewska-Scibak & Jerzy Sowa

INTERNATIONAL SYMPOSIUM ON INDOOR AIR QUALITY IN ASIA

This symposium held in Bangkok on 28th and 29th November 1991 was a satellite to the 13th Asian Conference on Occupational Health held on 25th-27th November at the same venue.

The symposium Chairman was the Treasurer of IAI, Dr B R Reverente. The symposium participants numbered over 80 and almost 50 papers were presented.

The symposium was jointly organised by Indoor Air International and the Asian Association for Occupational Health in collaboration with the Thailand Ministry of Public Health, the Thailand Office of the National Environment Board and the Institute of Environmental Research of Chulalongkorn University, Bangkok.

Papers were presented from nations across the Asia-Pacific region including Australia, China, Hong Kong, India, Indonesia, Japan, Korea, Malaysia, Philippines, Singapore, Thailand and Vietnam. There were also a few from the West including Germany, Russia, UK and USA.

The topics covered illustrated the wide range of indoor air problems in the region. Vehicle exhaust emissions are seen as a major source of indoor air pollution in many urban areas in Asia and combustion products from heating and cooking and incense burning are problems in many countries. Radon levels are high in some parts of the region and in cold climates the use of underground dwellings and shopping areas raises specific hazards. Legionella has been identified in many countries in the region and is probably more prevalent than official statistics would suggest. Asbestos and man-made mineral

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fibres were the subject of three papers.

Occupational problems were not surprisingly those most commonly discussed. In many parts of Asia there are occupational exposures which are far in excess of those now seen in the West and the cost of improving standards is hard to meet in many developing countries.

As well as being a meeting of many nationalities the symposium was an excellent example of multidisciplinary approach. Specialists from Occupational Health and Industrial Hygiene were able to listen to Architects, Ventilation Engineers, Statisticians, Pathologists, Toxicologists and Analytical Chemists. This mix led to some most stimulating discussion sessions.

During the symposium there was an IAI Council meeting and a General Assembly of members. These provided an opportunity for some of the Executive Committee to update Asia members on recent activities and future plans.

It is hoped that a book of proceedings of the symposium will be published by IAI and Mahidol University, Bangkok towards the end of 1992. Further details will be announced when available.

George Leslie

MEETING IN RABKA, SOUTHERN POLAND 8th JANUARY 1992

Jointly with the European Respiratory Society (ERS), IAI organised a one-day Symposium on various aspects of indoor air quality in relation to health.

Rabka is situated in low mountainous country south of Krakow and is the location of the National Institute "Mother and Child". This Institute which is headed by Professor Halusza, has 500 beds for children with diseases such as cystic fibrosis, tuberculosis and various immunological disorders. Some of the children who come from all over Poland, are long-stay patients, while others are brought to Rabka for just short periods of treatment by their mothers who can stay in cheap accommodation in the town.

The hospital was purposely built in hilly country in the hope that the air would be purer than at lower altitudes. In Poland soft coal is the main fuel and outdoor air pollution from the burning of coal is a serious problem, even in semi-rural areas such as Rabka. However, a slow change over to natural gas -

imported from the former Soviet Union - is planned and with it the hope that this will benefit the children. Needless to say, Rabka proved to be a marvellous location for a meeting because of the atmosphere of kindness and compassion which was everywhere pervasive.

It was also a fascinating time to visit a country which is full of hope and energy following its escape from the tyranny of Communism. The country does, of course, face formidable economic problems. However, there is no dearth of ingenuity or willingness to overcome these problems through hard work and living standards are rendered tolerable by there being plenty of food and an abundance of coal.

Some 60-70 physicians and medical scientists together with a few ventilation engineers, hygienists and representatives of other disciplines took part in the Symposium.

The 10 contributions were as follows:

A D Milner - "Child health and indoor air" K Pisiewicz - "Airway diseases in relation to passive smoking" D Teculescu - "Respiratory health and contact with home pets in French adolescents" K Pisiewicz - "Electric oven - benefit or evil?" P Gutowski - "Sick building syndrome - medical aspect" A Charkowska and P Wargocki - "Methods to predict and evaluate the impact of the indoor environment on man" T Jedrzejewska-Scibak - "Ventilation and indoor air quality - role, possibilities and limitations" F J C Roe - "Indoor air risk factors for lung cancer" A Gardiner - "Predictive importance of simple parameters of respiratory dysfunction regarding cardiovascular mortality" A Lorimer - "Cardiovascular risk factors: the Scottish approach"

After each paper there was time for a few questions from the floor and the discussions which these engendered were both well informed and lively.

Although coal is the principle fuel in Poland, indoor heating in apartment blocks in cities is mainly by hot water pipes from separately-sited boilers. Indoor air pollution from open fires is, therefore, not a large scale problem. Thus, without doubt, outdoor air pollution is a far more serious problem than indoor air pollution in Poland. As far as the respiratory health of children is concerned the problems from indoor air would seem to be much the same as those in other countries with a similar climate to that of Poland.

Francis J C Roe

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CORRESPONDENCE

Dr Bazas writes:

Regarding the Athens conference next April I have done as much as could work here for attracting Greek participants. The situation does not seem to be very satisfactory owing in my opinion, to the high for Greek standards registration fees, amounting approximately to 240 US\$ which is rather unusual for international conferences held here to date. Nevertheless, I keep trying advertising the conference here by all means.

I spoke twice, 29th November and 6th December from the Greek Church's Radio Station on "The impact of electromagnetic fields on health" in collaboration with Prof, Moussas of the Astrophysics Department, Athens University. I took the opportunity to combine the indoor pollution with the electromagnetic fields created by the numerous modern house and office electric and electronic equipment. I stressed that this subject will be discussed in detail at the IAI conference, by eminent specialists. I plan also to give some lectures invited by parents Schools in early May 1992.

With all good wishes for 1992.

Athens, December 1991

SPECIAL OFFER TO IAI MEMBERS

"Quality of the Indoor Environment" International Conference : Athens, Greece 28-30 April 1992

The book of proceedings (720 pages) is available to members at a specially discounted price of £25.00. Please add £1.00 towards postage in the UK and £2.00 if outside the UK.

A special issue of the journal, "Environmental Technology" containing more than 100 pages of selected papers from the conference is also available at a discounted price of £10.00 plus £1.00 towards postage.

Please send cheques payable to IAI at:-

IAI, PO Box 460

Biggleswade

Bedfordshire SG18 0AW England

Tel: +44 767 318474 Fax: +44 767 313929

FORTHCOMING IAI MEETINGS

Indoor Air Quality in Developing Countries

Cairo, Egypt 2nd - 3rd May 1992

Contact: Professor Aly Massoud, Ain Shams University, Department of Community, Environment & Occupational Medicine, Faculty of Medicine, PO Box 38, Abbassia, Cairo Egypt.

Phone: +20-2-837-888 Fax: +20-2-349-5317

Symposium on Indoor Air Quality in Asia

Kuala Lumpur, Malaysia 20th August 1992

Organisers: Malaysian Institute of Engineers, Malaysian Institute of Architects, ENSERCH and IAI.

Contact: Dr Heng Huat Lim, MEDVIRON Consultants Sdn Bhd, 275-2 Jalan Tun Sambanthan, 54070 Kuala Lumpur, Malaysia. Phone: +60-3-274-3419

Fax: +60-3-274-8416

Indoor Air Quality in Central and Eastern

Europe High Tatras, Czechoslovakia 30th September

- 2nd October 1992 Organisers: Slovak Society for Environmental Technology and IAI

Contact: Professor D Petras, c/o Slovenska

Spolocnost Pre Techniku Prostredia, Kocelova 15, 815 94 Bratislava, Czechoslovakia.

Phone: +42-7-627-24 Fax: +42-7-685-74

Managing the Indoor Environment (Theme 9)

Part of the CIB-W70 bi-annual symposium:

Management, Maintenance and Modernisation of Buildings. Rotterdam, The Netherlands 28th - 30th October 1992 Organisers: CIB W70

Contact: ROSTRA Congrescommunicatie, PO Box 82345, 2508 EH The Hague, The Netherlands.

Fax: +31-70-356-2878

Quality Standards for the Indoor Environment

Prague, Czechoslovakia 1st - 3rd December 1992

Organisers Czech Society for Environmental Technology and IAI

Contact: Professor M V Jokl, c/o Society for Environmental Technology, Novetneho lavka 5, 116 68 Prague, Czechoslovakia Fax: +42-2-232-8611
OR

Dr L S Levy, University of Birmingham, Industrial Toxicology Unit, Institute of Occupational Health, University Road West, PO Box 363, Edgbaston, Birmingham B15 2TT, UK

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INDOOR AIR QUALITY UPDATE (IAQU).

Readers will recall the useful guide chart to diseases related to bioaerosols reproduced in our last newsletter. The January issue of IAQU reports a most interesting and detailed investigation of SBS in an office-library building and the results of the HVAC investigation, the IAQ assessment and the biogenic contaminants testing are very clearly laid out in a guide chart using the IAQU format.

The January issue also features a panel discussion of the state of IAQ by several prominent workers in the field. They were asked "What is the most significant result of your work in the past year, and what do you see happening in your field this coming year?" The answers were as varied as the individuals who responded. They included seven from the USA and one from UK - our own President, Frank Lunau, whose contribution follows. It encapsulates very neatly the past two years of the Association and an aim for 1992:

"Undoubtedly for myself the most significant results are the developments that are taking place in the international scene. My association, the International Association for Indoor Air Quality (IAI), in the space of just over two years has attained members in 33 countries and has successfully launched its peer-reviewed journal, *Indoor Environment*. The wide geographical spread of its membership is token of the interest that is being taken in IAQ in the less developed countries. Their problems do not parallel those in the advanced countries and their solutions are different, sometimes markedly so. Nevertheless, they have much to gain from a knowledge of the research, monitoring techniques, and legislative approaches of the advanced countries. Use of this information has to be approached in an informed way relevant to a country's particular problems. IAI has this aspect of IAQ very much in mind. This is mainly done through conferences, generally in conjunction with local institutes, and has been very successful over the past year in Southeast Asia and Eastern Europe.

I would hope that the coming year will produce opportunities for advanced countries to sponsor research in developing countries. This undoubtedly will produce trading opportunities for goods and services from the advanced countries"

Indoor Air Quality Update Volume 5 No. 2 February 1992 from Cutter Information Corp., 37 Broadway, Arlington, MA 02174-5539, USA.
Fax: +1-617-648-8707

REVIEWS

INDOOR AIR POLLUTION, PROBLEMS AND PRIORITIES

This authoritative book edited by our President Frank Lunau and President Elect George Leslie was published by the Cambridge University Press last month. The sixteen chapters by internationally recognised scientists in the field, many members of IAI, cover perceptions of indoor air quality as well as factual articles in over 300 closely packed pages. It will be reviewed in a later Newsletter.

PASSIVE SMOKING - IS IT A HEALTH HAZARD?

Lord Walton of Detchant. *Occupational Health Review* October/November 1991

John Walton states in the first two lines of this interesting article that whilst he can claim no personal expertise in occupational medicine or epidemiology (he is a very eminent neurologist), he was surprised to read the critique by Dr Francis Roe in *Occupational Health Review* for June/July 1991 (OHR 32, pp. 13-15) - you will remember that this was reviewed in *Air Mail 5*, page 7 - challenging the evidence suggesting a link between environmental tobacco smoke (ETS) and lung cancer and roundly criticising the booklet *Passive Smoking: a health hazard*.

The noble Lord is impressed that the booklet was prepared after consultation with innumerable experts but concedes that Dr Roe is right to say that the association between ETS and lung disease cannot yet be proven.

This eminent neurologist with no personal expertise in occupational medicine or epidemiology has, I consider, fallen into the trap of taking as gospel the opinions of "experts" without having had the opportunity to study and take professional advice on the dubious quality and doubtful statistical validity of the papers on which the opinions are based.

Walton also mentions discussions in 1986 concerning the possibility of a proportional relationship between exposure and excess risk at the low levels of ETS that may be absorbed passively by non-smokers (between 0.1% and 1% of the amounts of smoke absorbed by smokers). It was concluded that by extrapolation perhaps two to three hundred cases of lung cancer per annum in the United Kingdom could be attributable to passive smoking. I understand that extrapolation down to such small amounts is of doubtful validity.

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I am no statistician but in the course of my work as an occupational physician am well used to the concepts of hazard and risk concerning toxic substances in the workplace - especially since the recent introduction of the Control of Substances Hazardous to Health (COSHH) regulations in the United Kingdom. There seems to be no doubt that smoking cigarettes is a hazardous occupation. The point at issue surely is whether there is a measurable risk to onlookers from the altered, decaying and rapidly diluting products of tobacco combustion in the air of ventilated workplaces. Dr Roe states that on the basis of existing evidence it is simply not possible to be sure whether or not there is any risk to health in terms of lung cancer or any other disease from other people's smoke. However, one can bring common sense to bear on the issue. Under conditions of adequate ventilation, it is most unlikely that exposure to ETS could have any measurable adverse effect on health.

Walton quotes the Morling judgement of February 1991 and concludes by pointing out three main objectives of a smoking policy:

- 1 To help smokers who want to stop
- 2 To make sure that non-smokers are not bothered by, or involuntarily exposed to, smoke at work; and
- 3 To make sure that the unique magnitude of the threat to health from smoking is well understood.

I support these objectives but would from a practical and common sense point of view delete from objective No.2 "or involuntarily exposed to".

John Dille

INDOOR POLLUTION

Steve Coffel and Karen Fieden

Ballantine Books, New York
(ISBN 0-449-90476-8) 278pp US\$ 9.95

The main interest of this book to those working in the indoor environment field is that it is an example of consumerism rather than in any technical content. A feature of many consumer publications is the use, sometimes regrettably departing from strict scientific impartiality, that can be made of the technical literature. This book avoids the worst of these excesses but does contain many remarks that are not referenced in any way to enable the reader to check back.

The book deals with the whole spectrum of indoor pollutants, airborne, microbiological, radon and water

quite adequately for the layman. The main parts of interest to the indoor environment specialist is the workplace. Apart from one or two minor mentions of the industrial workplace the focus of interest is on offices and public buildings. Considerable attention is directed towards ventilation systems, which, as it is a US authored book, are air conditioning systems. The ASHRAE ventilation standard 62-1989 is commended and, interestingly, the use of local exhaust ventilation for the control of office processes is made much of. There are some useful check lists and sample questionnaires but little information on the interpretation of the latter. This is unfortunate because the use of questionnaires in investigations into building related illnesses can be misleading in unskilled hands. There is some confusion about the place of occupational exposure standards in the office situation, in one place it is stated that the offices are unregulated, in another the OSHA limit for ozone is used as a figure to be obeyed.

It is a salutary book to read because it reminds us that our final client is the public. To this reviewer, at any rate, it raises the question as to whether indoor environment professionals get their case across with sufficient clarity and precision and indeed whether sufficient attention is paid to the education of the public as opposed to communicating with our peers.

We have a lot to offer but are we enabling the public to make sufficient use of our talents?

F W Lunau 19.02.92

THE POSSIBLE BIOLOGICAL EFFECTS OF LOW FREQUENCY ELECTROMAGNETIC FIELDS

Report of a Working Party of the Institution of Electrical Engineers - July 1991

The Working Party was asked "to review all currently available evidence with regard to the possible biological effects of low-level, low-frequency electromagnetic fields associated with overhead power distribution cables, house wiring, domestic appliances and VDUs and submit a report on the findings", and did so in a very brief report of 14 pages including references and appendices. The main conclusion of the report was that "there is at present insufficient biological and experimental data to make a health risk assessment or even to determine whether there is a potential hazard to health with regard to abnormal effects of electromagnetic fields".

The report made it clear that there was no accepted

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mechanism by which such effects might occur. Numerous models had been put forward but all were highly speculative and difficult to test in the laboratory. No agreed methodology for in vivo or in vitro testing had been established, and the accumulated data from laboratory studies, which are in fact quite extensive, painted a picture of a wide variety of techniques being used with varying results. A striking feature of the results was that very few, if any, of the reported effects had been independently replicated by other workers, and that in any case most of the effects claimed were only seen at electric field strengths orders of magnitude greater than residential levels. The working party could find no established connection between exposure to extremely low frequency fields and the cancerous transformation of living cells.

Concern over possible health risks to humans from such fields has mainly arisen from epidemiological evidence, starting with a case-control study in Denver in 1979 claiming to show a link between childhood cancer mortality and the residential proximity and wiring configurations of electric power lines. However, subsequent such studies have produced conflicting results and the overall data are difficult to interpret. Although adult leukaemia has not been associated with directly measured magnetic fields nor with residential proximity to overhead power lines and electricity substations, there is a considerable body of evidence on occupational risk among radio/television repairmen, electricians, welders, electrical technicians, computer and telephone mechanics and power line workers. A meta-analysis of results from 11 studies shows a significant increase in total leukaemia (Relative risk 1.18, 95% limits 1.09-1.25) and in acute myeloid leukaemia (1.45, 1.27-1.65), and a recent report has also shown an excess of deaths from brain cancer among electrical workers. In their summary, the working group note that these studies do not provide a firm link with electric or magnetic field exposures and may be observing some other occupational factor. Even if confirmed they suggest an overall increase in cancer mortality from these occupations which they regard as low, of order 0.5%.

In their brief discussion section the report concludes that "the available epidemiological evidence provides, at best, very weak support" for a link with leukaemia, noting merely that "all the studies are easily criticisable on the basis of low detection power and questionable surrogate measures of exposure". It seemed very surprising to me that these two points should be emphasised, because these are reasons

why no effect might be seen when one actually existed, rather than an explanation of an observed increase. After all, it is well known that inaccuracy in measuring exposure normally tends to bias relative risks towards unity. The lack of discussion of artefacts which might cause a spurious increase in risk was notable. It would seem obvious to me that people who live near power lines are likely to differ from people who do not in terms of quality of housing, social class, occupation, and probably a whole range of other variables. However, there is no mention of the extent of such confounding, nor of the difficulties of adjustment for it in statistical analysis. In the discussion on nuclear power-stations as a possible cause of childhood leukaemia, considerable attention has been given to the theory of Kinlen that it is in fact an infectious disease, with risk higher in areas where many families move in a short time. In contrast, the report fails to discuss other causes or possible causes of leukaemia at all, with the exception of possible exposure to solvents and other chemicals for electrical/electronic workers, and generally gives a somewhat superficial impression.

It is interesting to contrast current opinions on the possible effect of extremely low frequency electromagnetic fields on leukaemia with that of environmental tobacco smoke on lung cancer. The relative risk of acute myeloid leukaemia, at 1.46, is larger and more statistically significant than is the relative risk for lung cancer in relation to husband's smoking (a recent estimate is 1.18 with 95% limits 1.07-1.29). There are clearly documented sources of bias in the husband's smoking data due inter alia to misclassification of active smoking status and to confounding by diet, whereas sources of bias in the electromagnetic field data seems to be undemonstrated. However expert committees in various countries seem to consider it virtually proven that environmental tobacco smoke causes lung cancer but regard any effect of extremely low frequency electromagnetic fields as not more than suggestive at best. It will be interesting to see how opinions change over the next 5 years or so as new evidence (in both areas) comes in. In the meantime I think one should reserve one's opinion (again in both areas).

Overall, though the report is of some use as a summary for the reader with no knowledge of the area to get a quick impression of the main types of evidence and what they show, and seems in general to be fair, I found it too short to be satisfactory. I would need, certainly for the epidemiology, at least a paragraph or two on each study, with relevant

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summary tables, before feeling I knew enough about the relevant data actually to examine critically the conclusions reached.

Peter Lee

INTERNATIONAL MEETINGS 1992/3 OF INTEREST TO MEMBERS

APRIL 1992

28th-30th Quality of the Indoor Environment. Indoor Air International (Athens, Greece) Contact: Conference Secretariat, Quality of the Indoor Environment, Unit 6, 2 Old Brompton Road, London SW7 3DQ, UK

30th-2nd May First Annual IAQ Conference and Exposition. National Coalition on Indoor Air Quality. (Tampa, Florida) Contact: Glenn Fellman, NCIQA Sufka & Assoc., 1518 K St., N.W. Washington, D.C. 20005, USA Phone: +1-202-628-5336

MAY 1992

4th-8th Improving Indoor Air Quality in Non-Industrial Buildings. Occupational Safety and Health Education Resource Centre. (Piscataway, New Jersey) Contact: Occupational Safety and Health Education Resource Centre, 45 Knightsbridge Road, Brookwood II, Piscataway, NJ 08854-3923, USA Phone: +1-908-463-5062 Fax: +1-908-463-5133

7th-8th Diagnosing and Mitigating Indoor Air Quality Problems. Association of Energy Engineers. (Washington, DC) Contact: AEE Energy Seminars, PO Box 1026, Lilburn, GA 30226 Phone: +1-404-925-9633

12th-14th International Environment 1992: Exhibition and Conference. (London, England) Contact: Barry Hewson, Labmate Ltd, 12 Alban Park, Hatfield Road, St Albans, Herts AL4 0JJ, UK Phone: +44-727-831337 Fax: +44-727-41694

18th-22nd CIB (Congres Mondial du Batiment) '92. World Building Congress (Montreal, Canada) Contact: H Lacoste, CIB '92, World Building Congress, National Research Council Canada, Ottawa K1A 0R6, Canada Phone: +1-613-993-9009 Fax: +1-613-957-9828

30th-5th June American Industrial Hygiene Conference 'Work and Health, Tradition and Revolution'. American Industrial Hygiene Association. (Boston, Mass.) Contact: American Industrial Hygiene Conference and Exposition, PO Box 8390, 345 White Pond Drive, Akron, Ohio

44320, USA

JUNE 1992

2nd-5th XXIIemes Journees Nationales Premiere Rencontre Europeene De Medecine Du Travail. la Societe de Medecine du Travail et d'Ergonomie de l'Ouest. Contact: Comite d'Organisation, XXIIemes Journees Nationales de Medecine du Travail, 2 rue Linne, B.P. 789, 44029 Nantes Cedex 04 Phone: +33-40-44-26-90 Fax: +33-40-69-58-83

12th Allergy Problems in Buildings. (London, UK) Contact: Dr Jagjit Singh, H+R Environmental Investigations Ltd, Netley House, Gomshall. Surrey GU5 9QA, UK Phone: +44-48641-3221 Fax: +44-48641-2911

22nd-26th An International Symposium on Environmental Sensing - Monitoring Toxic Chemicals and Biomarkers. European Optical Society (EOS) and SPIE - The International Society for Optical Engineering. (Berlin, Germany) Contact: Europto, c/o Direct Communications, Xantener Strasse 22, D-1000 Berlin 15, Germany Fax: +49-30-8-82-20-28

22nd-27th IUTOX Satellite Meeting on: Absorption, Distribution, Metabolism & Excretion of Nicotine & Related Alkaloids. (Salsomaggiore Terme, Italy) Contact: Nicotine Conference, Room B22A, Chelsea Department of Pharmacy, Kings College, Manresa Road, London SW3 6LX, UK Phone: +44-71-351-2488 Fax: +44-71-351-5307

JULY 1992

4th-6th Fourth European ISSX Meeting: Toxicological Evaluation of Chemical Interactions: Relevance of Social, Environmental and Occupational Factors. The International Society for the Study of Xenobiotics. (Bologna, Italy). Contact: SOGEPACO Convention and Travel, Piazza della Costituzione 5/c, I-40128 Bologna, Italy Phone: +39-51-6435111 Fax: +39-51-6435149

22nd-24th International Symposium on Room Air Convection and Ventilation Effectiveness (ISRACVE). University of Tokyo (Tokyo, Japan) Contact: Professor S Murakami, Chairman of ISRACVE, Institute of Industrial Science, University of Tokyo, 7-22-1, Roppongi, Minato-ku, Tokyo, 106 Japan Phone: +81-3-3402-6231 Ext. 2575 Fax: +81-3-3746-1449

AUGUST 1992

30th-4th Sept. 9th World Clean Air Congress.

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International Union of Air Pollution Prevention Associations (Montreal, Canada) Contact: Peter Mitchell, National Society for Clean Air, 136 North Street, Brighton BN1 1RG, UK
Phone: +44-273-26313

SEPTEMBER 1992

1st-4th Work With Display Units '92. (WWDU '92) 3rd International Scientific Conference, Technische Universität Berlin (Berlin, Germany) Contact: Work With Display Units '92, General Secretary, ERGONOMIE Institut für Arbeits- und Sozialforschung Forschungsgesellschaft mbH, Soldaer Platz 3, D - 1000 Berlin 19

2nd-4th Roomvent '92. Third International Conference on Air Distribution in Rooms. The Danish Association of Heating, Ventilation and Air-Conditioning Engineers (DANVAK). (Aalborg, Denmark) Contact: Roomvent '92, Conference Secretariat, Danish Association of HVAC Engineers, Orholmvej 40B, DK-2800 Lyngby, Denmark
Phone: +45-4287-7611

6th-11th European Aerosol Conference. (Oxford, England) The Aerosol Society. Contact: The Aerosol Society, PO Box 34, Portishead, Bristol BS20 9NR, UK

14th-18th 13th AIVC Conference - Ventilation for Energy Efficiency and Optimum Indoor Air Quality. (Nice, France) Contact: Air Infiltration and Ventilation Centre, Barclays Venture Centre, University of Warwick Science Park, Sir William Lyons Road, Coventry CV4 7EZ, UK
Phone: +44-203-692050 Fax: +44-203-416306

14th-18th Euronoise 92 - Co-operation in Noise Control. (London, UK) Contact: Euronoise 92, Institute of Acoustics, Po Box 320, St Albans, Herts AL1 1PL, UK
Phone: +44-727-48195 Fax: +44-727-50553

18th-20th Indoor Air Quality. Harvard School of Public Health. (Boston, Massachusetts) Contact: Office of Continuing Education, Dept. B, Harvard University School of Public Health, 667 Huntington Avenue, Boston, Massachusetts 02115, USA
Phone: +1-617-432-1171

21st-23rd Occupational Health '92. British Occupational Hygiene Society & The Health & Safety Executive. (Sheffield, England) Contact: BOHS, Suite 2, Georgian House, 101 Great Northern Road, Derby DE1 1LT, UK
Phone: +44-332-298-101 Fax: +44-332-298-099

22nd-25th 1992 International Symposium on Radon and Radon Reduction Technology. US EPA Air and Energy Engineering Research Lab., et al. (Minneapolis, Minnesota, USA) Contact: Radon Symposium, c/o CRCPD, 205 Capital Avenue, Frankfort, KY 40601, USA
Phone: +1-502-227-4543 Fax: +1-502-227-7862

23rd-25th Building Pathology '92. (Cambridge, UK) Contact: Dr Jagjit Singh, Hutton + Rostron Environmental Investigations Ltd, Netley House, Gomshall, Surrey GU5 9QA, UK
Phone: +44-48641-3221 Fax: +44-48641-2911

OCTOBER 1992

2nd The Control of Legionellosis. British Occupational Hygiene Society. (London, UK) Contact: BOHS, Suite 2, Georgian House, 101 Great Northern Road, Derby DE1 1LT, UK
Phone: +44-332-298-101 Fax: +44-332-298-099

7th-9th Fifth International Jacques Cartier Conference: Indoor Air Quality, Ventilation and Energy Conservation in Buildings. The Centre for Building Studies of Concordia University/Centre de Thermique de l'INSA de Lyon (CETHIL) of France (Montreal, Canada) Contact: F Haghighat, Centre for Building Studies, Concordia University, 1455 de Maisonneuve Blvd. West, Montreal, Quebec H3G 1M8, Canada Fax: +1-514-848-7965

18th-21st IAQ '92: Environments for People Symposium. American Industrial Hygiene Association, ASHRAE, and the American Conference of Governmental Industrial Hygienists. (San Francisco, California) Contact: Jim Norman, Manager, Technical Services, ASHRAE, 1791 Tullie Circle, N.E. Atlanta, GA 30329-2305, USA

22nd-23rd 4th International Symposium of the ISSA Research Section: Hazard Control at the Workplace (including a Workshop on measuring atmospheric pollution at the workplace and biological monitoring). (Strasbourg, France) Contact: INRS - Att. C Skornik, 4e Colloque du Comité Recherche, 30 rue Olivier-Noyer, 75680 Paris Cedex 14, France

DECEMBER 1992

7th-9th First International Scientific Conference. International Occupational Hygiene Association (Brussels, Belgium) Contact: Conference Secretariat, ECCO (European Congress Consultants & Organisers), Rue Vilain XIII, 17a - B-1050 Brussels
Phone: +32-2-647-87-80 Fax: +32-2-640-66-97

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FEBRUARY 1993

17th-19th Building Design Technology and Occupant Well Being in Cold and Temperate Climates. Association Royale Technique de l'Industrie du Chauffage, de la Ventilation et de Branches Connexes (ATIC) and American Society of Heating, Refrigerating and Air Conditioning Engineers Inc. (ASHRAE) (Brussels, Belgium) Contact: AGITOUR, Avenue Louise 265, B-1050 Brussels, Belgium
Phone: +32-2-649-81-70 Fax: +32-2-649-32-62

22nd-25th International Conference: Work and Health. The Directorate of Health and Safety, The Commission of the European Communities (Copenhagen, Denmark) Contact: TBA

MARCH 1993

1st-5th Toxic and Carcinogenic Effects of Solid Particles in the Respiratory Tract. International Life Sciences Institute/Hannover Medical School/Fraunhofer Institute of Toxicology and Aerosol Research. (Hannover, Germany) Contact: Sharon Weiss, Associate Director ILSI Research Foundation, 1126 16th Street NW., Suite 100, Washington, DC 20036, USA
Phone: +1-202-659-0789 Fax: +1-202-659-8654

JULY 1993

4th-8th Indoor Air'93. 6th International Conference on Indoor Air Quality and Climate. (Helsinki, Finland) Contact: Professor Olli Seppanen, Helsinki University of Technology, Otakaari 4 A, SF-02150 Espoo, Finland
Phone: +358-0-4513600 Fax: +358-0-4513611

SEPTEMBER 1993

26th-1st Oct. 21st International Congress on Occupational Health International Commission of Occupational Health (Nice, France) Contact: C.O.24 France, Yveline Lagarde, "Les Miroirs", 18 Avenue d'Alsace, Cedex 27, 92096 Paris la Defense
Phone: +33-1-47-62-33-70 Fax: +33-1-47-62-31-53

NOVEMBER 1993

1st-3rd CLIMA 2000 "Engineering the built environment" CIBSE, ASHRAE, CIB. (London, England) Contact: Clima 2000, c/o CIBSE, 222 Balham High Road, London SW12 9BS UK.
Fax: +44-81-675-5449

MAD HATTER

Japanese inventor Hisashi Mineta, has filed European patent application (321 574) on a cure for "technostress".

Mineta claims that radiation from modern electronic equipment can cause headaches, irritation, fatigue, anxieties and depression because it generates a flow of high-frequency current through so-called tsubo acupuncture points. These, he says, have a lower electrical resistance than skin that is located elsewhere in the body.

He claims that his specially designed hat reduces current flow in the tsubo point in the head. People who are working near electronic equipment feel better, he claims, when they wear the hat.

New Scientist, 25 Nov. 1989.

LEGAL SHARKS

Vice-President Dan Quayle's welcome remarks about lawyers at last week's annual American Bar Association bash reminds Observer of the one about a lawyer, a doctor and a priest.

Finding themselves shipwrecked in shark-infested seas, their life raft drifts close to an island. Suddenly the lawyer stands up. "I can't take it any more," he cries, dive overboard and starts swimming towards the island.

To the amazement of the doctor and the priest, the shoal of sharks parts to let him through. "It's a miracle!" exclaims the priest. "Just professional courtesy," says the doctor. *Financial Times*

BACKLASH

A bit of a sandstorm has been stirred up by the Observer's claim that a camel with no hump is called Humphrey. That's the name for a camel with three humps, snorts reader Peter Tray, the no humped variety being obviously a horse designed by a committee.

R S Bristowe of Sheffield disagrees. In his book, the name for a three humped camel is Triumph.
Financial Times 12.03.92

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OCCUPATIONAL HYGIENE

Risk Management of Occupational Hazards

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This new international journal has been created in response to the growing need for improvements in the management of health risks in the workplace, and will commence publication in the autumn of 1992. It will promote the science of anticipation, recognition, evaluation and control of the occupational hazards (physical, chemical and biological) through the publication of papers on the latest results from research and on the development of new methods and strategies.

A Call for Papers

Papers are welcome on the fundamental aspects of the field, including the detection, evaluation and control of hazards, as well as those concerned with related topics, such as occupational medicine and nursing, ergonomics, psychology, environmental protection, indoor aspects, waste management and accident prevention, provided the emphasis is on the occupational hygiene aspects of these topics.

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